INPUT DEVICES AND THEIR USE

ABSTRACT

A keypad has a substrate carrying an array of sense elements arranged to change state

5   in response to keypad operation, a flexible cover disposed above the substrate and having an exposed surface defining an array of independent key regions, with combination key regions defined in interstices between adjacent independent key regions, and an array of discrete snap elements extending between the cover and the substrate and spacing the cover from the substrate. The snap elements are each located between two adjacent independent key regions

10   and adapted to resiliently collapse as a non-linear response to local pressure against the exposed cover surface to provide tactile feedback of keypad operation. A telephone with the keypad has columns of combination key regions that include multiple numerical columns together including numerical regions corresponding to numerals 0 through 9, with each numerical column containing a plurality of the numerical regions, and at least one other

15   column containing key regions corresponding to punctuation symbols. A touch-sensitive input device (such as a keypad or touchpad, for example) has an exposed, continuous surface defining a planar area, and a grid of sense elements coextensive with the area of the exposed surface and responsive to engagement of the exposed surface by an operator to establish a position of said engagement on the exposed surface. The exposed surface varies in elevation

20   across its planar area to form a series of tactile features. A method of interpreting IACK keypad input includes sensing keypad input corresponding to a combined actuation of a plurality of independent key regions of the keypad, and comparing the sensed input to defined sets of independent key inputs corresponding to combination keys. For sensed inputs found to correspond to a plurality of independent key regions associated with a combination

25   key, a combination key input is registered. For sensed inputs found not to correspond to any combination key, the sensed input is compared to recorded custom chorded key associations. For sensed inputs found to correspond to a recorded custom chorded key association, a sequence of characters according to the corresponding chorded key association is registered. A method of dialing a telephone includes entering a desired sequence of alphanumeric

30   characters including at least one alpha character. The telephone generates a corresponding

sequence of numerals by transposing the alpha character into one of the numerals 2 through 9 according to standard telephone keypad letter-number correspondence

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